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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,117	10/10/2003	Jeffrey E. Nesbitt	28823-903	2750

29450 7590 05/15/2006

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/684,117	Applicant(s) NESBITT, JEFFREY E.	
	Examiner Camie S. Thompson	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed 3/9/06.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-100 is/are pending in the application.
- 4a) Of the above claim(s) 1-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 69-100 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment and accompanying remarks March 9, 2006 have been acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 68 and 78-88 are rejected under 35 U.S.C. 102(b) as being anticipated by Small, U.S. Patent Number 4,372,002.

Small discloses loose cotton staple and like fibers wherein the impregnate the lumen of each of such fibers with a chemical liquor and permanently locate the chemical liquor with the fibers (column 1, lines 20-35). Figures 4-6 describe each fiber is twisted, hollow and flattened and the lumen is also flattened. Column 6, lines 58-63 of the reference discloses that massaging and kneading action of each fiber individually the liquid in the lumen of each of the hollow fibers is moved along the otherwise collapsed lumen.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 69 and 78-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spehner, U.S. Patent Number 5,232,779.

Spehner discloses plant fibers such as bast, flax, hemp, jute and cotton that can be incorporated into a matrix as per instant claims 69 and 78-84 (see column 1, line 58-column 2, line 28).

Additionally, the reference discloses that the fibers are impregnated with a solution comprising a carbonate, binding agent and an oxidizing agent such as synthetic elastomers, phenolic resins, resols, melanine resins or epoxy resins as per instant claims 75-77 (see column 1, lines 41-58 and column 2, lines 40-56). It is disclosed in column 3, lines 12-23 of the Spehner reference that additives can be used such as lubricants (molybdenum disulfide, graphite, zinc sulfite, tricalcium phosphate, titanium oxide), flame retardant compounds (antimony oxide, alum, iron sulfate or urea phosphate), waterproofing agents and reducing agents. It is also disclosed in column 3 of the reference that plant fibers that still contain wood components, sugar substances and pectins can be impregnated with the solution. The Spehner reference does not specifically disclose that the additives are absorbed on the fiber surface. Upon drying, the additives would absorb on the surface of the fiber. This limitation is rendered obvious. It is not inventive to discover the optimum or workable ranges by routine experiment *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Claims 99-100 are product-by-process claims. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production, if the product in the product-by-process claim is the same as or obvious from a

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product of the prior art, the claim is unpatentable even though a different process made the prior art product. See MPEP 2113.

6. Claims 69-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spehner, U.S. Patent Number 5,232,779 in view of Stucky et al., U.S. Patent Number 6,344,268.

Spehner discloses plant fibers such as bast, flax, hemp, jute and cotton that can be incorporated into a matrix as per instant claims 69 and 78-84 (see column 1, line 58-column 2, line 28).

Additionally, the reference discloses that the fibers are impregnated with a solution comprising a carbonate, binding agent and an oxidizing agent such as synthetic elastomers, phenolic resins, resols, melanine resins or epoxy resins as per instant claims 75-77 (see column 1, lines 41-58 and column 2, lines 40-56). The Spehner reference does not the use of a blowing agent in its solution. Stucky teaches a foamed fiber composite comprising a polymeric resin and fiber (see abstract). Additionally, Stucky teaches that the fiber composite can be foamed through the addition of a blowing agent such as azodicarbonamide and a hydrazine derivative (see column 5, line 31-column 6, line 4). The Stucky reference discloses fibers such as soft wood fibers, natural fibers including bamboo, rice, sugar cane and recycle and reclaimed fibers from newspapers, cardboard, boxes, computer printouts (see column 5, lines 1-7). Chemical blowing agents are added to a fiber solution mixture to reduce the density and weight. Therefore, it would have been obvious to one of ordinary skill in the art to add a chemical blowing agent to the suspension in order to reduce the density and weight of the suspension when it is incorporated into the fiber.


Response to Arguments

7. Applicant's arguments filed March 9, 2006 have been fully considered but they are not persuasive. Applicant argues that the Spehner reference does not teach or suggest the solution to lumen not collapsing during extrusion such that the natural voids of the lumen are preserved causing the fiber to maintain natural density and strength characteristics. The Spehner reference discloses plant fibers such as bast, flax, hemp, jute and cotton wherein the fibers are impregnated with a solution comprising a carbonate, binding agent and an oxidizing agent. The natural result of capillary/wicking action in natural/wood/plant fibers would be drawn the solution into the fibers. Applicant argues that the additives are simply included upon application. True, however, it does not preclude the additives from being naturally wicked into the fibers. Applicant argues that the Spehner reference does not address the problem of the caused by collapsing lumen. Applicant does not claim that the lumen does not collapse. Applicant claims that the solution is drawn into the lumen of the fibers. The fact that applicant has recognized another advantage which would come following the suggestion of the prior art cannot be the basis for patentability when the difference would otherwise be obvious. *Ex Parte Obiaya*, 227 USPQ 58 (Bd. Pat. App & Inter. 1985). The Spehner rejection is maintained.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L. Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 5/10/06